Semantics by analogy for illustrative volume visualization

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Supplement

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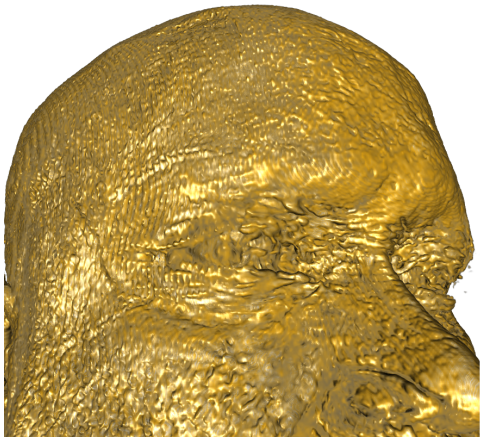
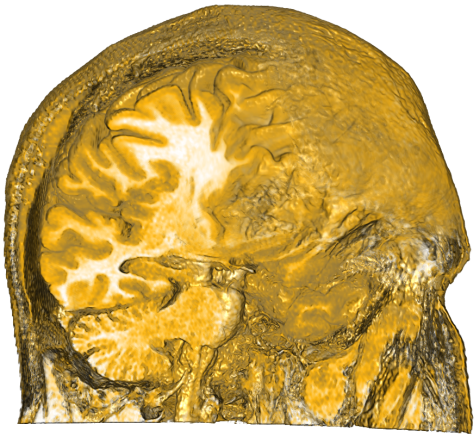
Abstract

This document shows more results of applying our technique to the visualization of the MR head dataset shown in Section 4. We here again use our technique for a semantics-driven opacity modulation, but use different input properties. The initial raycasting shader without semantic shader augmentation (Fig. 1(a)) is subject to occlusion of the brain by surrounding tissue.

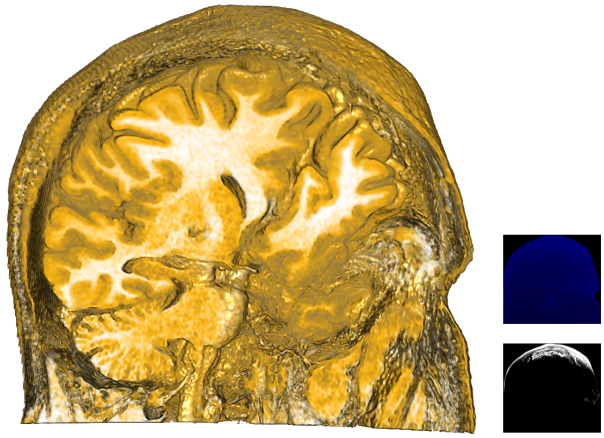


(a) Result of the initial shader. Without semantic augmentation, the shader is subject to occlusion of the brain.

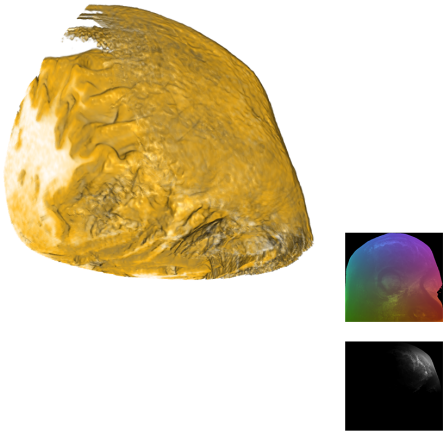


(b) Result of the augmented shader. The view on the brain is generated by using the two rules from Fig. 2(a) and Fig. 2(b).

Figure 1: Semantics by analogy applied to the visualization of an MR head dataset.



(a) Cut-away view created by using the rule *"if distance from object-space origin is high then opacity is high"*. The insets to the right show the property image and the mask.



(b) Selective view generated by using the rule *"if position is as in mask then opacity is medium."* This is an example of a 3D semantic property.

Figure 2: Semantics by analogy applied to the visualization of an MR head dataset.

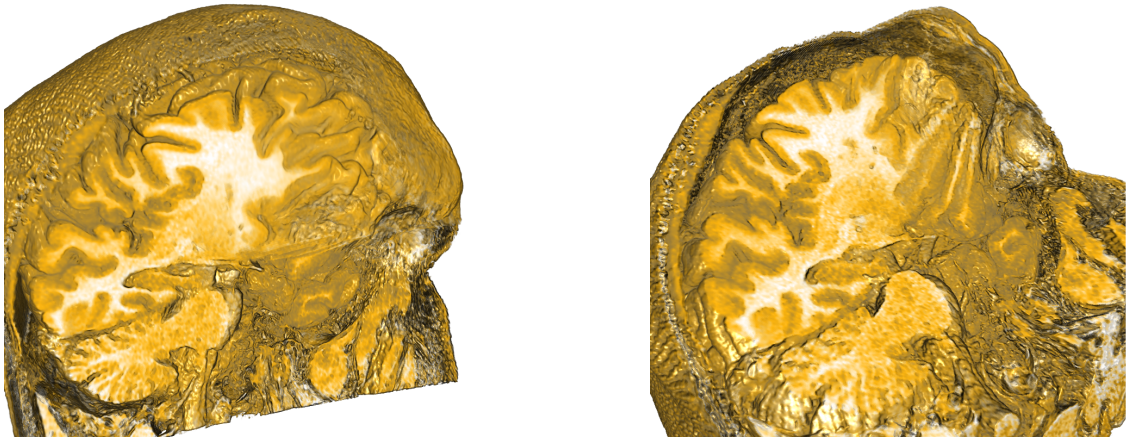


Figure 3: The result of Fig. 1(b) from different viewpoints.